



SAFETY DATA SHEET

AFALON 450 SC Herbicide

Section 1: Identification of the Substance and Supplier

Product name : AFALON 450 SC
Chemical name of active Ingredient(s): 3-(3,4-Dichlorophenyl)-1-methoxy-1-methylurea
Supplier: ADAMA New Zealand Limited
Level1/19 Elms Street, Wakatu Estate, Stoke, Nelson, New Zealand
P.O.Box 1799, Nelson New Zealand.
Telephone +64 3 543 8275 Fax: +64 3 543 8274
Emergency Telephone: 0800 POISON (0800 764 766)

Section 2: Hazards identification

Hazard Classifications: 6.1E, 6.3B, 6.4A, 6.8B, 6.9A, 9.1A, 9.2A, 9.3C
Most important hazards: May be harmful if swallowed, inhaled or absorbed through the skin. May cause eye irritation and mild skin irritation. May cause reproductive/development damage from repeated oral exposure.
Presumed to cause organ damage from repeated oral exposure at high doses.
Very toxic to aquatic organisms, very toxic to the soil environment.

Section 3. Composition/information on Ingredients

Substance/preparation	Preparation				
Information on hazardous ingredients *					
Common name	CAS No.	%	EC Number	Symbol	R-
Phrases					
Linuron (ISO)	330-55-2	36-40	206-365-5	Xn,N	R22-40-48/22-50/53

- **Occupational Exposure Limit(s), if available, are listed in section 8**

Section 4: First-Aid Measures

First-aid measures: Remove victim from area of exposure. Wash off remaining material with plenty of water.
Inhalation: Remove victim to fresh air. If breathing is difficult: artificial respiration. Get medical attention.
Ingestion: Wash out mouth with plenty of water. Get medical attention. Never give anything by mouth to an unconscious person.
Skin contact: Remove contaminated clothing. Wash away remainder with water and soap.
Eye contact: Wash out with plenty of water with the eyelid held wide open for at least 15 minutes. Get medical attention.
Notes to a physician: There is no specific antidote. Treat symptomatically and give supportive therapy.
Protection of first-aiders: Use appropriate protection (see section 8).

Section 5: Fire-Fighting Measures

Extinguishing media

Suitable: Dry chemical, water spray, foam, carbon dioxide.
Unusual fire/explosion hazards: Flashback may occur along vapour trail.
Hazardous thermal (de)composition products: Chloride compounds and nitrogen oxides

Protection of fire-fighters: Self-contained breathing apparatus and total protection required in enclosed areas.



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Section 6: Accidental Release Measures

Personal precautions: Wear suitable protective clothing.
Environmental precautions: Do not discharge into drains or the environment.
Methods for cleaning up: Absorb remainder in sand or other inert material. Dispose of in an authorised waste collecting point.

Section 7: Handling and Storage

Handling: Ventilation required.
Storage: Keep only in the original container. Keep in a cool, dry, well ventilated place away from direct sunlight. Protect from frost. Store 10-30°C

Packaging materials suitable: Plastic containers

Section 8: Exposure Controls/Personal Protection

Engineering measures: Ventilation required.
Hygiene measures: When handling do not eat, drink or smoke. Wash hands thoroughly after handling. Wash clothing separately before re-use.
Common name: **Linuron (ISO)**
Not Established
Personal protective equipment:
Respiratory system: Respiratory protection is not required if good ventilation is maintained.
Skin and body: Wear suitable protective clothing. Chemical resistant boots.
Hands: Chemical resistant gloves.
Eyes: Safety goggles or face shield.

Section 9: Physical and Chemical Properties

Physical state: Liquid
Colour: Tan
Odour: Aromatic
Boiling point: 100°C (Water)
Density: 1.19 ± 0.02 g/mL @ 20°C
Vapour pressure: 0.05 mPa @ 20°C (Linuron) (ISO)
Solubility in water: Dispersible
Octanol/water partition coefficient: log P = 3.0 (Linuron) (ISO)
pH: 7 – 8.5
CIPAC, MT 75
Flammability: Not flammable
Explosion properties: Not Explosive
Oxidation properties: Not oxidizing

Section 10: Stability and Reactivity

Stability: Not subject to polymerization. Thermal decomposition from 210°C
Materials to avoid: Oxidizing agents, acids and alkali.
Hazardous reactions : None
Hazardous decomposition products: Chloride compounds and nitrogen oxides.

Section 11. Toxicological Information

Acute toxicity - Oral: LD₅₀ (rat) = 4,480 mg/kg
Acute toxicity - Dermal: LD₅₀ (rabbit) > 4,000 mg/kg
Acute toxicity – Inhalation: LC₅₀ (rat) > 1.74 mg/L (maximum attainable concentration) (4 hours)
Skin irritation: Not irritating (rabbit).
Eye irritation: Not irritating (rabbit).



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Sensitization :	Non sensitizer (guinea-pig)
Common name:	Linuron (ISO)
Chronic toxicity:	NOAEL (rat) : = 25 ppm or 1.3 mg/kg/day (2 years) NOAEL (mouse) = 50 ppm or 6.5 mg/kg/day (2 years)
Carcinogenicity:	EPA : Group C EU : Carc. Category 3 IARC : Not classified
Mutagenicity:	Not mutagenic
Reproduction toxicity:	NOAEL (rat) : = 6.83 – 8.3 (100 ppm) mg/kg/day
Other information :	Teratogenicity - NOAEL (rat): 20 mg/kg/day. (Maternal nad Fetal) NOAEL (rabbit) = 10 mg/kg/day (Maternal); 25 mg/kg/day (Fetal)

Section 12: Ecological Information

Ecotoxicity:	Fish: Rainbow trout (96 hours) 10 mg/L < LC ₅₀ ≤ 100 g/L Daphnia magna: 1 mg/L < EC ₅₀ (48 hours) ≤ mg/L Algae (scenedesmus subspicatus): EC ₅₀ (72 hours) ≤ 1 mg/L
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Very toxic to aquatic organisms.

Common name:	Linuron (ISO)
Mobility:	Soil – Not mobile Adsorbed on organic matter and clay. K _d = 2.2 – 18 mL/g K _{oc} = 362 – 877 mL/g Water Low risk of underground water contamination.

Persistence/degradability:	Soil Lab. - Half-life time (t _{1/2}): 38 -135 days (15-25°) Field – DT ₅₀ : 13-82 days Degradation is primarily via: microorganisms. Water DT ₅₀ : 48 days
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Bioaccumulative potential:	BCF: 38-49
Ecotoxicity:	Fish LC ₅₀ (96 hours) rainbow trout (oncorhynchus mykiss) = 3.15 mg/L NOEC (21 days) rainbow trout (oncorhynchus mykiss) = 0.1 mg/L Daphnia magna EC ₅₀ (24 hours) = 0.31 mg/L NOEC (21 days) = 0.18 mg/L Algae (scenedesmus subspicatus) EC ₅₀ (72 hours) = 0.016 mg/L Birds Bobwhite quail (colinus virginianus) LD ₅₀ = 314 mg/kg Bobwhite quail (colinus virginianus) LC ₅₀ = 1,250 ppm (8-day feeding) Bees Oral LD ₅₀ > 160 µg/bee Contact LD ₅₀ > 1600 µg/bee

Very toxic to aquatic organisms. Low toxicity: birds, Non toxic: Bees

Section 13: Disposal Considerations

Methods of disposal:	Container Disposal - Triple rinse empty container and add rinsate to spray tank. Burn in an appropriate incinerator, if circumstances such as wind direction permit. Otherwise crush or puncture and bury in a suitable landfill, or if appropriate, recycle. Avoid contamination of any water supply with product or empty container.
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Section 14: Transport Information

UN Number	3082
Proper shipping name	Environmentally hazardous substance, Liquid, N.O.S, (Linuron)
DG Class	9
Packing Group	III
Hazchem Code	2X
Marine Pollutant	Yes
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National transport regulations: Do not carry this product on a passenger service vehicle.

Segregation: Check the land transport Rule Dangerous Goods 1999, Rule 45001 for additional information. Sea transport may require additional segregation. Refer: NZS5433; Sea Segregation, or the International Maritime Dangerous Goods Code for details.

Section 15: Regulatory Information

New Zealand Regulatory Information:

NZFSA Approval: Registered pursuant to the ACVM Act 1997. No P7239
See www.nzfsa.govt.nz/acvm for registration conditions.

Approved pursuant to the HSNO Act 1996, Approval No. HSR000230
See www.ermanz.govt.nz for registration conditions

Hazard Classifications: 6.1E, 6.3B, 6.4A, 6.8B, 6.9A, 9.1A, 9.2A 9.3C



ECOTOXIC

APPROVED HANDLER - This product must be under the care of an approved handler when it is applied in a wide dispersive manner or used by a commercial contractor.

RECORD KEEPING - Records of use must be kept under certain circumstances – see The New Zealand Standards for Management of Agrichemicals (NZS8409) for details.

Section 16: Other Information

Note: This product is a registered agricultural chemical and must be therefore be used in accordance with the container label directions. A comprehensive package of toxicological and environmental data for the active ingredients of this product has been submitted to the Government health and environment authorities and has been evaluated by expert toxicologists and environmental scientists.

The information contained in the Safety Data sheet is correct to the best of our knowledge at the date of issue. It is intended as a guide for the safe use, handling, disposal, storage and transportation and is not intended as a warranty or as a specification. The information relates only to the product specified and may not be suitable for combinations with other materials or in processes other than those specifically described herein.

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HISTORY

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